

Montana Board of Oil and Gas Conservation Environmental Assessment

Operator: G3 Operating LLC
Well Name/Number: Wheeler Ranch 1-16-21H
Location: NW NE Section 16 T30N R57E
County: Roosevelt, MT; Field (or Wildcat) Wildcat

Air Quality

(possible concerns)

Long drilling time: No, 30-40 days drilling time.

Unusually deep drilling (high horsepower rig Triple derrick drilling rig to drill a single lateral horizontal Bakken Formation well test, 19,617' MD/9,953' TVD.

Possible H2S gas production: Yes, slight H2S possible (Mississippian Formations).

In/near Class I air quality area: No Class I air quality area nearby.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ X Air quality permit (AQB review)

☒ X Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other:

Comments: No special concerns – using triple derrick rig to drill a single lateral Bakken formation horizontal well, 19,791' MD/10,031' TVD. If there are existing pipeline for gas in the area then gas must be tied into system or if no gathering system nearby gas can be flared under Board Rule 36.22.1220.

Water Quality

(possible concerns)

Salt/oil based mud: Yes to oil based invert drilling fluids for intermediate casing hole. Horizontal hole will be drilled with saltwater. Surface casing hole, freshwater, and freshwater mud system to be used.

High water table: No high water table anticipated.

Surface drainage leads to live water: No apparent drainages nearby from this location.

Water well contamination: No, closest water wells are about 1/2 of a mile to the southwest, about 5/8 of a mile to the northwest, about 5/8 of a mile to the southeast, about 3/4 of a mile to the northeast, about 7/8 of a mile to the west and about 1 mile to the southwest from this location. Three of these wells are industrial use wells and the other wells are domestic, irrigation and stock. Depth of these wells are 102' to 260'. This well will be drilled with freshwater and freshwater mud to 1,750' and steel surface casing will be run and cemented to surface to protect groundwater.

Porous/permeable soils: Yes, sandy silty soils.

Class I stream drainage: No, Class I stream drainages.

Mitigation:

☒ X Lined reserve pit

☒ X Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

☐ Off-site disposal of solids/liquids (in approved facility)

☐ Other:

Comments: 1,750' surface casing will be drilled with freshwater, steel casing will be run to 1,750' and cemented back to surface, to protect freshwater zones in adjacent water wells. Also, covering the Fox Hills aquifer. Adequate surface casing and operational BOP equipment will prevent problems.

Soils/Vegetation/Land Use

(possible concerns)

Steam crossings: None anticipated.

High erosion potential: No, location will require a small cut of up to 4.4' and small fill of up to 0.8' required.

Loss of soil productivity: No, location to be restored after drilling, if nonproductive. If productive unused portion of this drillsite will be reclaimed.

Unusually large wellsite: No, very large well site 381'X500'.

Damage to improvements: Slight surface use appears to be a cultivated field.

Conflict with existing land use/values: Slight

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☒ Other Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be over highway 405 and county road #17 1013, a section line road. New access road will be built into this location, about 3132' off the existing county road into this location. Oil based invert drilling fluids will be recycled. Completion fluids will hauled to a commercial Class II disposal. Cuttings and solids will be buried/solidified(fly-ashed) on site in the lined reserve pit. The pit will be allowed to dry and the pit backfilled. No concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Residences are about 7/8 of a mile to the west and 1.325 miles to the southeast from this location. The Town of Froid, MT is about 9 miles to the west southwest from this location. A cemetery exists about 5/8 of a mile to the east northeast from this location.

Possibility of H2S: Yes, slight (Mississippian Formations).

Size of rig/length of drilling time: Triple drilling rig 30 to 40 days drilling time.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H2S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Species identified as threatened or endangered are the Pallid Sturgeon, Interior Lease Tern, Whooping Crane and Piping Plover. Candidate species is the Sprague's Pipit. NH tracker website indicates zero (0) species of concern and one (1) potential species of concern, the Eastern Screech Owl.

Mitigation:

☐ Avoidance (topographic tolerance/exception)

☒ Other agency review (DFWP, federal agencies, DSL)

☐ Screening/fencing of pits, drillsite

☐ Other: _____

Comments: Private surface cultivated land. State of Montana minerals, Trust Lands will do a surface EA. There may be species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites: None identified.

Mitigation

☐ avoidance (topographic tolerance, location exception)

☒ other agency review (SHPO, DSL, federal agencies)

☐ Other: _____

Comments: Private surface cultivated land. State of Montana minerals, Trust Lands will do a surface EA. There may be possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)

☐ Substantial effect on tax base

☐ Create demand for new governmental services

☐ Population increase or relocation

Comments: Wildcat well. No concerns

Remarks or Special Concerns for this site

No special concerns. Triple derrick drilling rig to drill a single lateral horizontal Bakken Formation well test, 19,617' MD/9,953' TVD.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected, some short term impacts will occur, but can be mitigated.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki

(title:) Chief Field Inspector

Date: March 10, 2012

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Roosevelt County water wells
(subject discussed)
March 10, 2012
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA
COUNTIES, Roosevelt County, Montana
(subject discussed)
March 10, 2012

Montana Natural Heritage Program Website
(Name and Agency)
Heritage State Rank= S1, S2, S3, T30N R57E
(subject discussed)

March 10, 2012
(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____